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Dynamic Aviation

June 10, 2002

FAA-02-12484-1

US Department of Transportation
Docket Management System
400 7th Street, SW.
Room PL 401
Washington, DC 20591-0001

Dear Ms. Ida Klepper,

Dynamic Aviation Group, Inc. is requesting an exemption from Title 14 of the Code of Federal Regulations part 137.53(c)(2). This exemption is requested based on it being in the public's best interest to not jettison spray loads over congested areas and the ability to show an equivalent level of safety with not installing a jettison system.

FAR 137.53(c)(2) states:

> *If other than a helicopter, it (the aircraft) must be equipped with a device capable of jettisoning at least one-half of the aircraft's maximum authorized load of agricultural material within 45 seconds. If the aircraft is equipped with a device for releasing the tank or hopper as a unit, there must be a means to prevent inadvertent release by the pilot or other crewmember.*

This letter, coupled with the attached performance charts, will show that Dynamic Aviation can accomplish the mission with an equivalent level of safety, and that it is in the public's best interest that a dump system not be installed in the aircraft as required by FAR 137.53(c)(2).

This letter will use, as an outline, the Aviation Safety Inspector's Handbook, Volume I, Page 1-117, Paragraph 157 - Content of Petition for an Exemption.

1) The Rule Requirement from which Exemption is sought:

   - 14CFR 137.53 (c)(2)

2) The Nature and Extent of the Requested Regulatory Relief:

   - FAR 137.53(c)(2) requires a system capable of jettisoning at least one-half of the aircraft's maximum authorized load of agricultural material within 45 seconds. Dynamic is requesting a general exemption to the rule to the extent of not installing a jettison system during operations using twin turboprop King Air 65A90 aircraft operating at or below the Maximum Certified Gross Weight.

3) A Description of Each Person or Aircraft to be covered by the Exemption:

   - The company plans to use Twin Turboprop King Air 65A90-1 and 65A90-4 aircraft.
   - While operating under the exemption, no Aircraft will at any time be loaded over the authorized maximum published gross weight as per the FAA approved Flight Manual.
   - In most cases, the aircraft will have sufficient performance to climb in standard conditions, single engine at more than three times the required 50 feet per minute as per FAR 137.51(b)(5)(ii). In all cases, the aircraft will have sufficient single engine performance to meet the climb requirements of 137.51.

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4) Any information, views, or arguments to support the action sought:

- The aircraft will be flown under Max Gross where the climb performance of 137.51(b)(5)(ii) is exceeded.
- Since the aircraft can easily remain airborne with the critical engine inoperative, it is in the interest of public safety to not dump the load and instead, to carry it to the point of landing.
- The way the aircraft is configured, it would take extensive modification to make a jettison system functional.

5) The reasons why a grant of exemption would be in the public interest:

- Many of the pesticides used in our operation such as Malathyon, Dibrom and Anvil are sprayed at ULV (Ultra Low Volume) i.e. ½ to 1 ounce per acre. Dibrom, Anvil and other ULV labels contain information about the proper dosage, application, and handling of the chemical. Compliance with Section 137.53(c)(2) would constitute a violation of the Federal law. Using a dump valve to dispense the chemical into the atmosphere in doses that exceed the manufacturer's recommended doses would produce a widespread contamination hazard affecting major waterways and all forms of animal and aquatic life. Deviating from the labeled instructions would clearly pose a greater health and environmental hazard than any potential aircraft problem.

  The pesticides sprayed are in the public interest in that the programs are dedicated to reducing the mosquito population, thus increasing comfort of the public and decreasing the chances of encephalitis spreading.

- Pheromone is a moth attractant. It is sprayed in the form of flakes. While the Flakes are not chemically dangerous, if a person on the ground were to get an excess quantity of Pheromone on their body, the person would be uncomfortable due to moths being attracted to their person for the next 3 to 4 weeks.
  - The Pheromone Flake program is a public interest program dedicated to slowing the spread of gypsy moth throughout the Region and thus not allowing the gypsy moth to decimate the tree population.
  - Aerial application of the Pheromone is conducted under the terms of a government contract and that a device to dump the chemical is expensive to design build and install. These costs must be recovered in the contract price

6) The action to be taken by the petitioner to provide a level of safety equivalent to that provided by the rule from which exemption is sought or the reason why a grant of exemption would not adversely affect public safety:

- "Action taken to provide a level of safety equivalent to that provided by the rule."
  - All aircraft used in Dynamic Aviation Spray operations are multi-engine turbine aircraft. The aircraft can climb on one engine to meet the requirements of FAR 137.51(b)(5)(2) at the loads that it will have onboard. This exceeds the equivalent safety level. At no time will the aircraft be loaded to a condition over Maximum Certificated Gross Weight.
- "Reason why a grant of exemption would not adversely affect public safety."
  - The public is no longer at risk of jettisoned flakes or chemicals. The aircraft does not present a hazard because it is loaded to an under Max Gross Weight condition.

Summary

The company can provide a higher than equivalent level of safety by not installing a dump system as required by FAR 137.53(c)(2). The moral, economic, and environmental ramifications from using a dump valve procedure are disastrously overwhelming. Installing a dump valve switch in the aircraft would open the possibility for a future environmental hazard. Keeping the insecticide on board during an emergency would ensure that potential material hazards are localized.

We are submitting this petition in response to a customer re-evaluating a contract bid that we put in. Their desire is for us to demonstrate our capability to them beginning in the next 14 days. We understand that the exemption process can take up to 120 days and we would appreciate if this request could be expedited as much as possible.

Thank you very much for your attention to this. If you need any additional information, or have any questions, please feel free to contact me.

Sincerely,

Wayne Cummings
Director of Operations

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SINGLE ENGINE CLIMB

CONDITIONS

1. MAXIMUM CONTINUOUS POWER
2. FLAPS AND GEAR UP
3. [illegible]
4. BEST RATE-OF-CLIMB SPEED

RATE OF CLIMB - FT/MIN

-200 0 200 400 600 800 1000 1200 1400 1600

WEIGHT - LBS

10000 9500 9000 8500 8000 7500 7000 6500 6000

TEMPERATURE - °C

60 40 20 0 -20 -40

REFERENCE LINE

PRESSURE ALTITUDE (FT)

SL 2000 4000 6000 8000 10000 12000 14000 16000

DEG (C)

-30 -20 -10 0 10 20

SINGLE ENGINE CLIMB

CONDITIONS

1. MAXIMUM CONTINUOUS POWER
2. FLAPS AND GEAR UP
3. INOPERATIVE PROPELLER FEATHERED
4. BEST RATE-OF-CLIMB SPEED